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| 10/537,717 | 12/06/2007 | Gottfried Beer | 075791.0232 | 5024 |
| 5073 | 7590 | 01/16/2009 | | |
| BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980 | | | EXAMINER | |
| | | | PING, CHARLIE YU | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2883 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com

glenda.orrantia@bakerbotts.com

Office Action Summary

Application No.

10/537,717

Applicant(s)

BEER ET AL.

Examiner

CHARLIE PENG

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to amended claim 1 and its dependent claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 5, 8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,731,882 to Althaus et al. in view of U.S. Patent 6,393,169 to Paniccia et al. Althaus teaches an optical connection assembly comprising:

a laser diode 12 and a photodiode 5; a spherical lens 18 that couples an optical fiber 40 with the laser diode 12 and the photodiode 5; wherein the laser and the photodiode communicate through a beam splitter 16, a light beam 9 and a mirror 7; and wherein the lens 18, the fiber 20, the mirror 17, the splitter 16 and the light beam 9 are on a common plane in a unit 17. (See at least Fig. 1 and description.)

4. Althaus does not specify how the light beam 9 is propagated in the unit 17. Paniccia teaches an optical interconnection assembly comprising a semiconductor layer 807 doped and configured as an optical waveguide for propagating a light beam 819 from a deflector 825 to a

beam splitter 827 that redirect to an optical conduit 823 or an optical element 837. (See at least Fig. 8 and description.) Since the Althaus and Paniccia references are from the same field of endeavor and of a similar design structure, Paniccia would have been considered a relevant prior art to Althaus' invention and it would have been obvious to one having ordinary skill in the art to modify Althaus' invention as suggested by Paniccia by using a waveguide to propagate light beam 9 for reasons well known in the art such as optical confinement and low loss.

5. With specific reference to claim 8, see an embodiment described and illustrated in Fig. 2 of Althaus.

6. With specific reference to claim 11-14, top and bottom sides of a substrate 1 are only relative to each other in Althaus' invention, i.e. housings 3 can be on top as illustrated or on the bottom when Figure are viewed upside down.

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althaus and Paniccia as applied to claim 1 above and further in view of U.S. Patent 4,875,750 to Spaeth et al. Althaus and Paniccia combine to teach the optical module as discussed above but does not show the parts for mounting the spherical lens 10. Spaeth teaches mounting a spherical lens 1 in an inverted and truncated pyramid cutout 3 in an optoelectronic coupling element. It would have been obvious to one skilled in the art to modify Althaus and Paniccia's invention by using the cutout as suggested by Spaeth to mount the spherical lens 10 for that it allows the lens to be mounted very accurately at a precisely defined position.

8. Claims 6, 7, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althaus and Paniccia.

9. With specific reference to claims 6 and 18, using an index matching material in interfacial regions between optical components is a very well known technique in the art and would be quite obvious for one skilled in the art to practice in order to reduce losses in the interfacial regions.

10. With specific reference to claim 7, plano-convex lens is one of many known different types of simple lenses and without evidence of criticality or unexpected results, usage of what is known or old cannot be considered inventive. Further, Althaus appears to show using plano-convex lenses 6 for collimating light beam emitted by the laser diode 12 and focusing light beam into the photodiode 4 as illustrated in Fig. 1.

11. With specific reference to claim 19, mere duplication of essential working parts already disclosed without providing new and unexpected results involves only routine skill in the art. *In re Harza*, 124 USPQ 378.

12. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althaus and Paniccia as applied to claim 1 above and further in view of U.S. Patent 4,969,712 to Westwood et al. Althaus and Paniccia teach the optical module with mirrors for reflecting light signals but not wavelength selective mirrors. Using a dichroic mirror or filter at an end of a waveguide to select optical signals by wavelengths is known in the art and described by Westwood as illustrated in Fig. 2, reference numeral 290. It would have been obvious to one skilled in the art to modify Althaus and Paniccia's invention by including dichroic mirrors for one of many different purposes such as preventing transmission or creating an optical splitter.

13. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althaus and Paniccia as applied to claim 1 above and further in view of DE 4422322 to ANT

Nachrichtentechnik. Althaus and Paniccia teach the optical module having a housing for receiving an optical fiber but not a plug receptacle. Such designs are well known in the art and as discussed by the '322 reference, (Page 5, lines 6-23), and it would have been obvious to one skilled in the art to appropriately modify Althaus and Paniccia's invention in order to reduce coupling losses.

Allowable Subject Matter

14. Claims 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 21 is allowed. Both claims comprise previously indicated allowable subject matter.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLIE PENG whose telephone number is (571)272-2177. The examiner can normally be reached on 9 am - 6 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/12/2009

/CHARLIE PENG/
Primary Examiner, Art Unit 2883